

**What is claimed is:**

1. A user programmable input apparatus with a keyboard,  
comprising:

5           a plurality of keys on the keyboard for input operations;  
          a microprocessor for receiving an input from the plurality  
          of keys;  
          a nonvolatile memory programmable by operating the  
          plurality of keys; and  
10          a transmission arrangement connected to the  
          microprocessor for outputting data to outside of the  
          input apparatus.

15          2. The input apparatus of claim 1, wherein the  
          microprocessor and nonvolatile memory are integrated in a chip.

          3. The input apparatus of claim 1, wherein the nonvolatile  
memory is programmed with a user programmable password.

20          4. The input apparatus of claim 1, wherein the nonvolatile  
memory is programmed with a user programmable hot key.

          5. The input apparatus of claim 1, wherein the nonvolatile  
memory is programmed with a user programmable data.

25

6. The input apparatus of claim 3, wherein the plurality of keys include a special key to program the password.

5 7. The input apparatus of claim 4, wherein the plurality of keys include a special key to program the hot key.

8. The input apparatus of claim 5, wherein the plurality of keys include a special key to program the data.

10 9. The input apparatus of claim 1, wherein the plurality of keys include a special key to initialize a programming procedure of the nonvolatile memory.

15 10. The input apparatus of claim 1, wherein the plurality of keys include a special key to simulate a mouse.

11. The input apparatus of claim 1, wherein the plurality of keys include a special key to simulate a joystick.

20 12. The input apparatus of claim 1, wherein the plurality of keys include a special key to simulate a computer peripheral.

25 13. The input apparatus of claim 1, wherein the plurality of keys include a special key to simulate one of the plurality of keys.

14. The input apparatus of claim 13, wherein the special control key has a predetermined report rate different from that of the simulated key.

5           15. The input apparatus of claim 1, wherein the plurality of keys are operated to change a key mapping by programming the nonvolatile memory.

10           16. The input apparatus of claim 1, wherein the nonvolatile memory is programmed with a command thereto by operating the plurality of keys.

15           17. The input apparatus of claim 1, wherein the transmission arrangement includes a wired transmission protocol interface.

            18. The input apparatus of claim 17, wherein the wired transmission protocol interface includes USB or PS2.

20           19. The input apparatus of claim 1, wherein the transmission apparatus includes a wireless transmission protocol interface.

25           20. The input apparatus of claim 19, wherein the wireless transmission protocol interface includes IR or RF.

21. The input apparatus of claim 19, wherein the wireless transmission protocol interface includes IEEE 802.11 or Bluetooth.

5           22. The input apparatus of claim 1, further comprising a display connected to the microprocessor to display a content stored in the nonvolatile memory.

10           23. The input apparatus of claim 1, further comprising an application software program executing outside the input apparatus to communicate with the input apparatus.

15           24. The input apparatus of claim 23, wherein the application software program is used to program the nonvolatile memory.

20           25. The input apparatus of claim 23, wherein the application software program is used to perform a function programmed in the nonvolatile memory.

25           26. A method for operating an input apparatus with a keyboard, the input apparatus having a microprocessor, a nonvolatile memory and a transmission arrangement, the keyboard having at least one special key, the method comprising the steps of:  
detecting a trigger signal of the keyboard;

storing a first data into the nonvolatile memory when the  
trigger signal is a programming signal;

transmitting a normal data corresponding to the trigger  
signal to outside of the input apparatus by the

5

transmission arrangement when the trigger signal is  
a normal keying signal; and

reading a second data corresponding to a programmed  
key from the nonvolatile memory and/or executing a

function corresponding to the second data when the

10

trigger signal matches the programmed key.